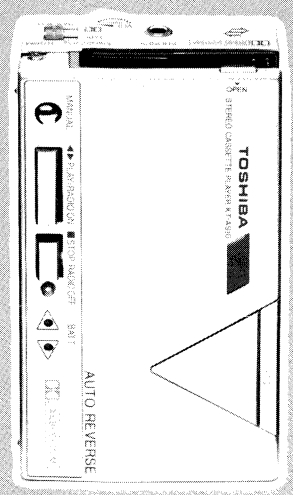
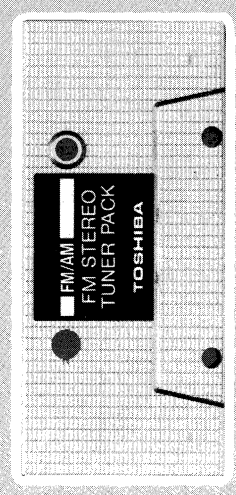
TOSHIBA

STEREO CASSETTE PLAYER

KT-AS10 (RP-AF5)





For Parts replacement in Tuner Pack, model RP-AF5, which is optional for KT-AS10 of "FY" version, refer to pages 20 to page 21 in this Service Data.

SPECIFICATIONS

■ Tape Section

Track system: Stereophonic
Recommended tape: Normal ferric, chrome dioxide, and metal alloy: C-30 to C-120 (Recorded tape)
Tape speed: 4.8 cm/sec.
Frequency response: Reproduction: 40 Hz to 14 kHz (normal), 40 Hz to 16 kHz (metal)
Output terminals: 3.5 mm dia. stereo headphones jack x 1
Maximum output power: Integration 40 mW (20 mW + 20 mW) with 32 ohm load
Power supply: 3V DC (R03 "AAA" x 2) External power source supplied to the [DC IN 3V] jack (3.4 mm dia. center contact negative)
Dimensions: 100.5(W) x 58(H) x 28.3(D) mm
Weight: 210 g (including batteries)

■ Tuner Section

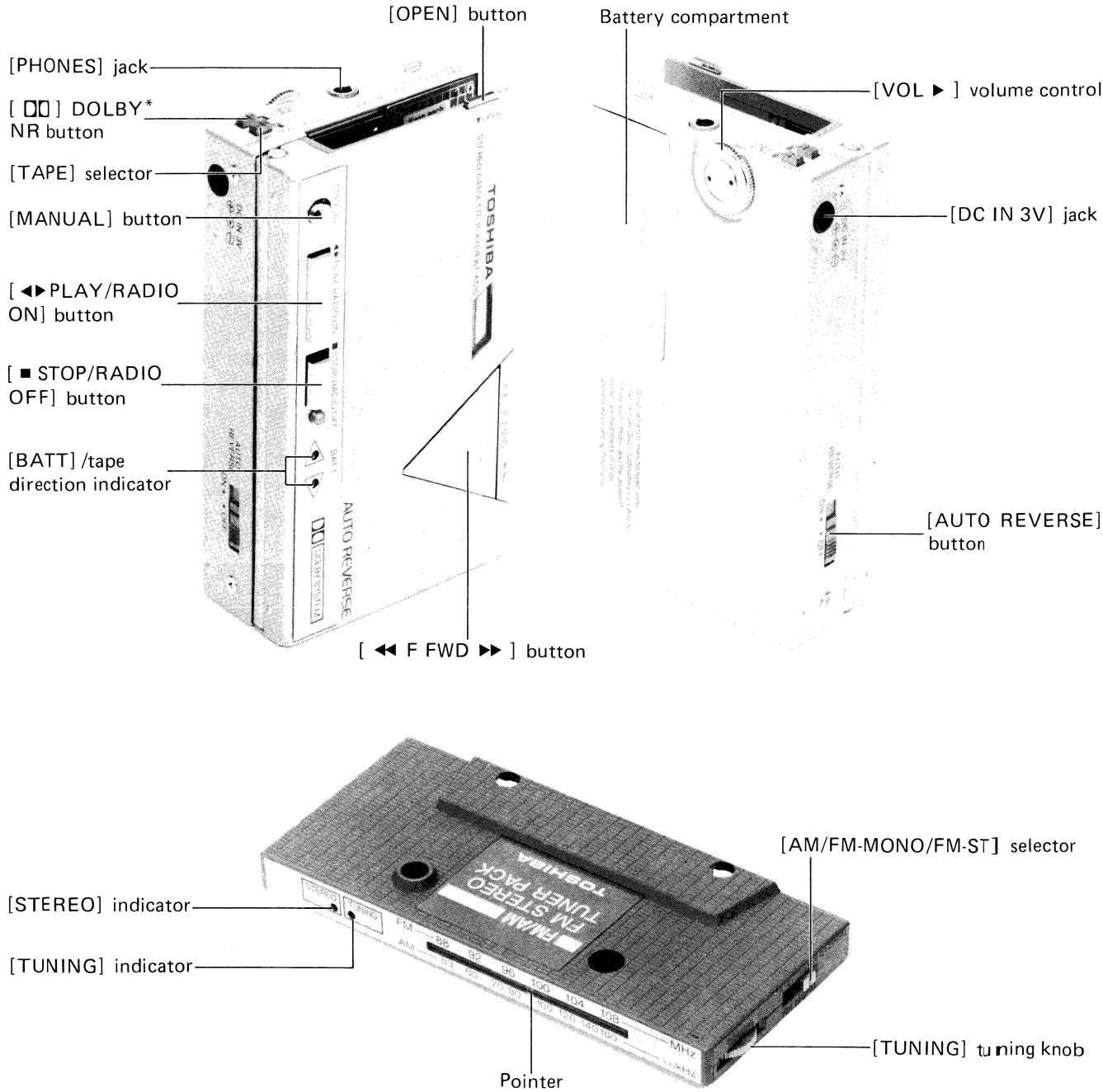
Receiving frequency: FM: 88 MHz to 108 MHz
AM: 526.5 kHz to 1606.5 kHz

- This AM/FM stereo tuner pack (RP-AF5) is designed exclusively for this unit and is not usable in other types of cassette players.
- Specifications are subject to change without notice due to improvement.

Specifications are subject to change without notice.

TA, TC, AY, TE, FY
PRINTED IN JAPAN 22905290 Apr., 1984 (S)

1. OPERATING CONTROLS



Name Label (KT-AS10)
TA, TC, AY, TE

TOSHIBA
STEREO CASSETTE PLAYER
MODEL NO. KT-AS10
POWER SOURCE DC 3V ⎓ | FTZ Prüf
IEC R03("AAA" CELL)×2 | Nr. 11/632
TOSHIBA CORPORATION MADE IN JAPAN

Name Label (KT-AS10)
FY

TOSHIBA STEREO
CASSETTE PLAYER
MODEL NO. KT-AS10
POWER SOURCE DC 3V ⎓ | FTZ Prüf
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TOSHIBA CORPORATION MADE IN JAPAN

Name Label (RP-AF5)

TOSHIBA
AM/FM STEREO
TUNER PACK
MODEL NO RP-AF5
TOSHIBA CORPORATION
MADE IN JAPAN

2. PRECAUTIONS

PRECAUTIONS ON SOLDERING AND DESOLDERING WORK FOR FLEXIBLE P.C. BOARD

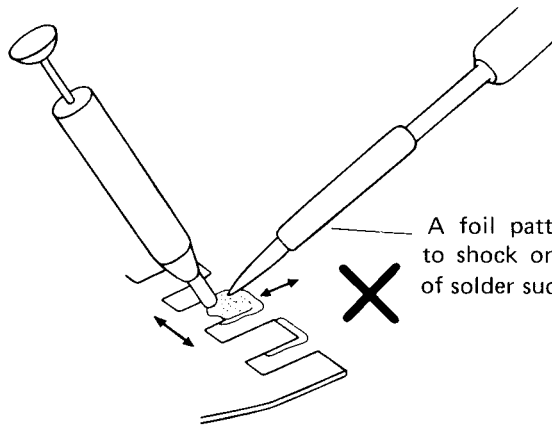
- KT-AS10 uses flexible P.C. Boards (FPC) for the Governer P.C. Board and head wirings.
  Improper handling of these board in repair work may cause possible damage on wiring patterns.
  To prevent such damage, proceed repair work such as soldering, desoldering, etc. by taking following precautions.

1. GENERAL CHARACTERISTIC OF FPC

Foil patterns not soldered on the flexible board can withstand bendings of approx. 100 times or more. If the patterns are soldered once, they can withstand bendings of approx. 50 times as long as they are not heated. However, if the patterns are bent 3 ∿ 5 times while they are being heated by soldering work, the patterns may be broken down or come off.

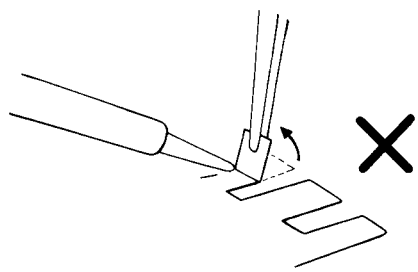
2. WORKS INHIBITED. . . . . .Do not make such work as stated below to prevent above damages.

(1) Do not use a manual type solder suction pump.

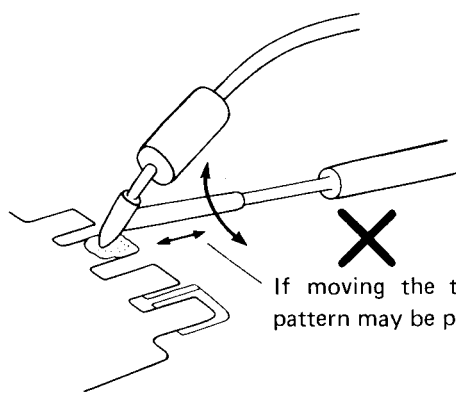


A foil pattern may be peeled off due to shock or stress applied at the time of solder suction operation.

(2) Do not bend the pattern at a sharp angle with tweezers.



(3) Do not absorb solder while the tip of electric solder suction pump is being moved.



If moving the tip while absorbing solder, the foil pattern may be peeled off.

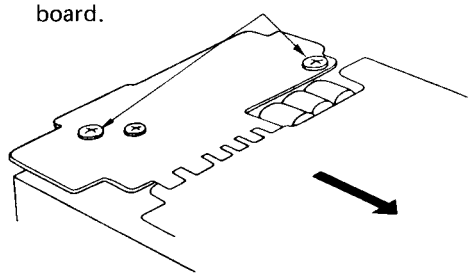
(4) Do not use a large – sized soldering iron.
- Use a soldering iron lower than 20W.

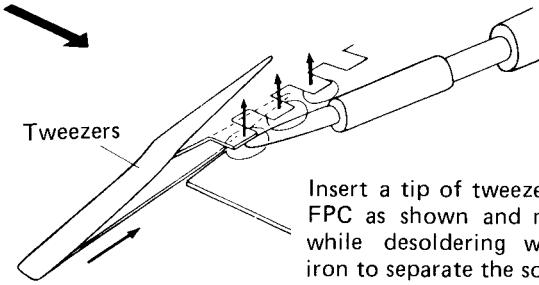
3. PROCEDURE RECOMMENDABLE. . . . . Proceed in the procedure below surely.

1 Connection part of governer P.C. Board and Main P.C. Board

(1) When using tweezers

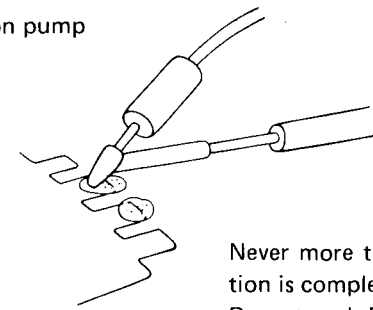
First loosen these screws so that the P.C. Board can be floated by approx. 2 mm the thickness of the board.





Insert a tip of tweezers from an end of FPC as shown and move the tweezers while desoldering with the soldering iron to separate the soldered part.

(2) When using an electric solder suction pump



Never more the tip of soldering iron until solder suction is completed.
Do not push FPC pattern strongly with the iron tip.

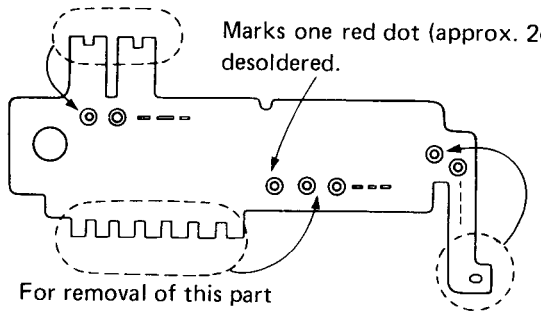
2 Connection part of head FPC and Main P.C. Board

Proceed the procedure as 1 .

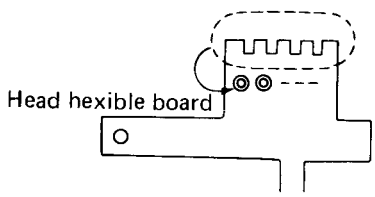
3 Connection part of governer P.C. Board and leaf SW

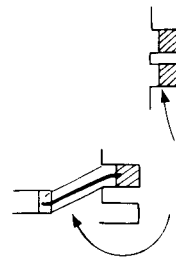
. . . . . Remove solder of terminal with an electric solder suction pump completely and proceed the removal.

4. MARKING WHEN REPAIRING. . . . . Put a mark on the position shown below to give a measure of strength of the FPC every time soldering or desoldering work is carried out.



FPC desoldered more than 3 times may include some defects!





Precisely observe borderlines between patterns and soldered parts, and if some of them are going to be broken, connect them with a tinned jumper wire (ϕ.2ϕ).

3. DISASSEMBLY INSTRUCTIONS

– CASSETTE PLAYER SECTION –

■ REMOVAL OF FRONT & BACK CABINETS

1. Remove two screws Ⓐ , two screws Ⓑ and two screws Ⓒ securing front and back cabinets. (Figure 1 and 2)
2. Remove an ornamental screw and volume knob of back cabinet, and the front and the back cabinets will be removed. (Figure 2)

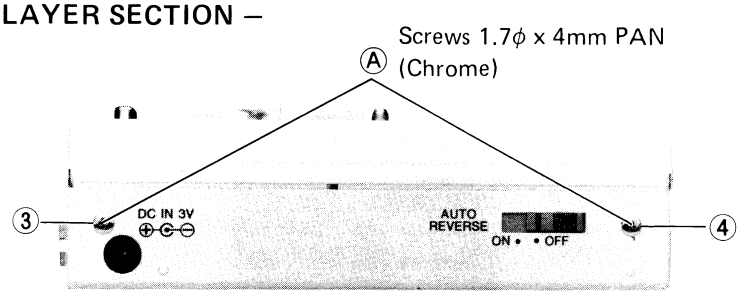


Figure 1

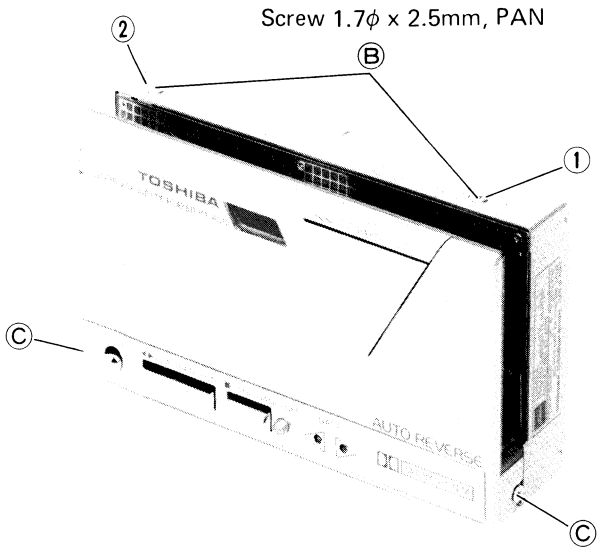


Figure 2

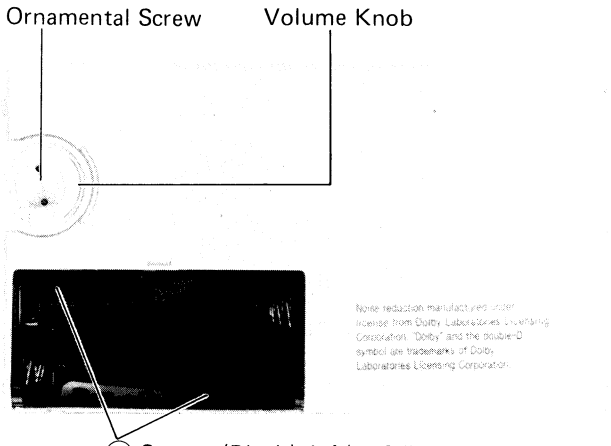


Figure 3

■ REMOVAL OF P.C. BOARD

1. Remove two screws Ⓓ , one screw Ⓔ , one screw Ⓕ , one screw Ⓖ and one screw Ⓗ , and then desolder the parts marked Ⓙ and Ⓚ .
2. Remove one screw Ⓛ , and the main P.C. Board and the governer P.C. Board will be removed. (Figure 3, 4 and 5)

Note: 1. Remove screw Ⓛ with the main P.C. Board raised slightly after removal of the other screws and the specified parts desoldered.
2. When mounting reverse switch knob, apply the switch knob at the back cabinet, and insert the switch into the unit with the back cabinet hold vertically. In this case, widen the opening for the reverse switch knob with nails.
3. When reinstalling cabinets, tighten screws in order of ① to ④ as illustrated.
4. Turn the volume knob clockwise fully, and set volume knob with " 0 " faced outside.

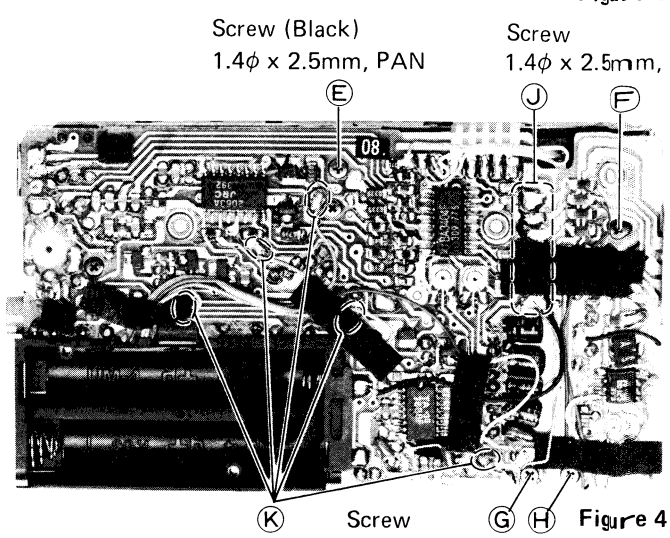


Figure 4

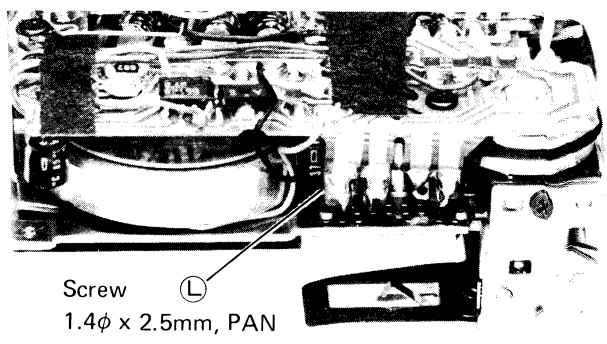
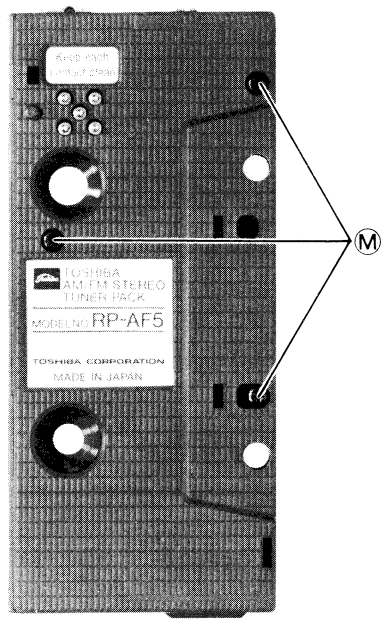


Figure 5

– TUNER PACK SECTION –

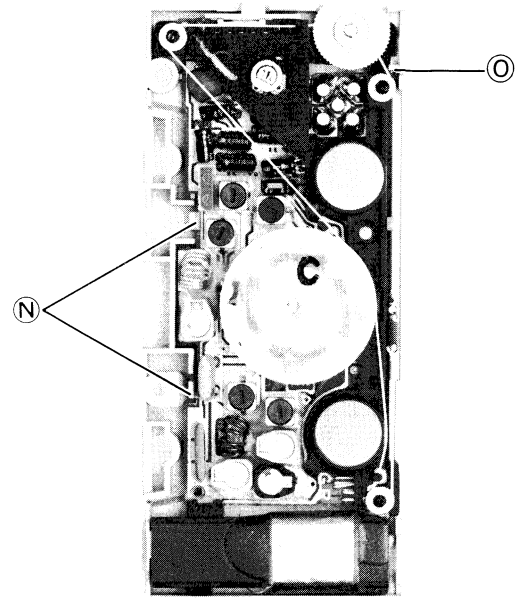
■ **UPPER CABINET REMOVAL**

1. Remove three screws Ⓜ securing bottom cabinet, and the upper cabinet will be removed.

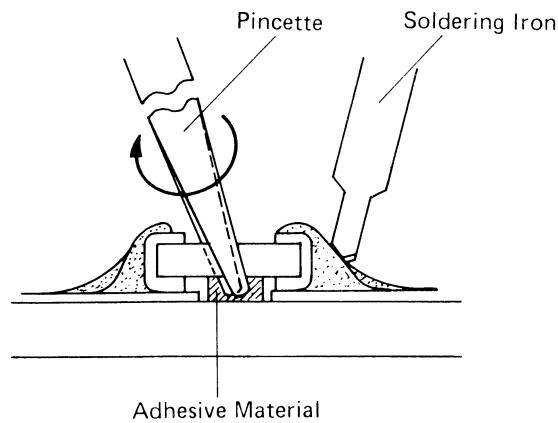


■ **P.C. BOARD REMOVAL**

1. Remove P.C. Board by lifting it up from bar antenna side while pushing two fooks Ⓝ .
2. In case of installing, first install dial case side fook Ⓞ, and then the P.C. Board.



4. CHIP PARTS REPLACEMENTS



Unsoldering ICs and Other Semiconductor Tips

1. Hold the part as its center with pincette, etc. and apply heat at soldered section (a) and (b) alternatively with soldering iron tip. Remove the part by moving it to left and right while the solder does not harden.
2. Cut or broken the part at it center with a diagonal cutter and remove by unsoldering each terminal of the part.

Note: Parts removed by the method 2 above can not be reused. Transistors removed by the method 1 above may be reused if they are removed carefully with less heat applied.

■ **Play Torque**

23 ∿ 47 g.cm

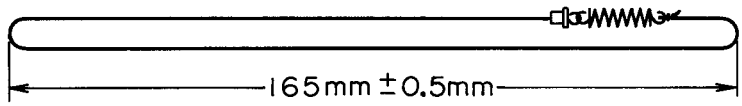
■ **Non Signal Current (Volume Minimum)**

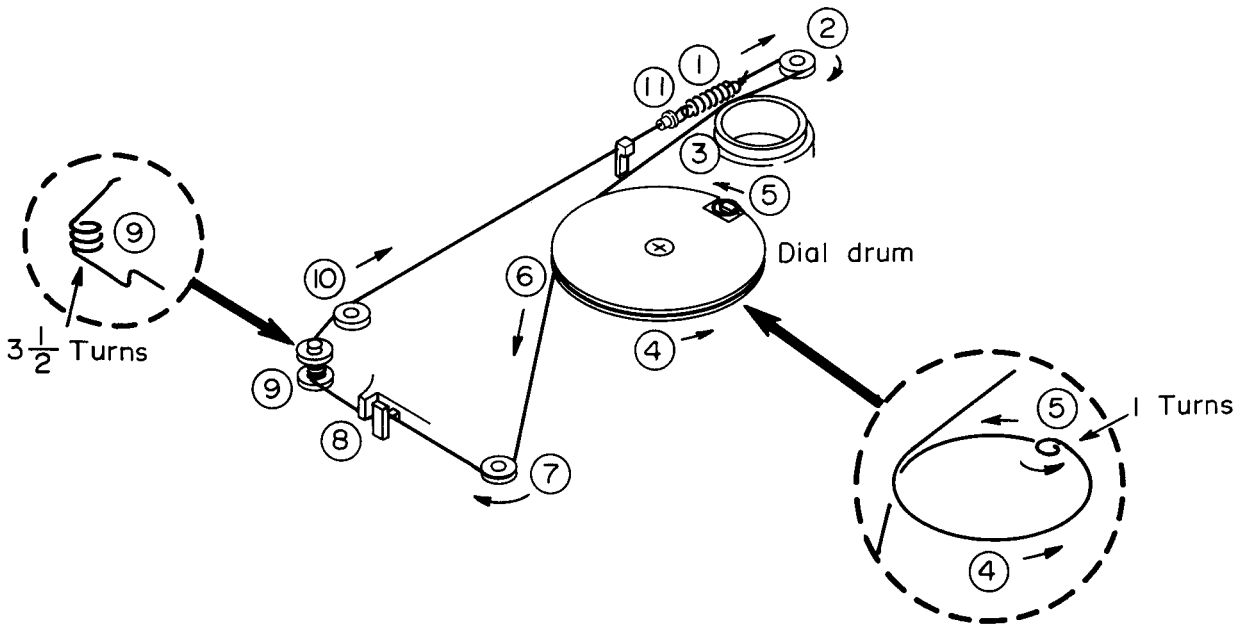
71.8 mA
31.8 mA
40.2 mA

5. DIAL CORD RESTRINGING

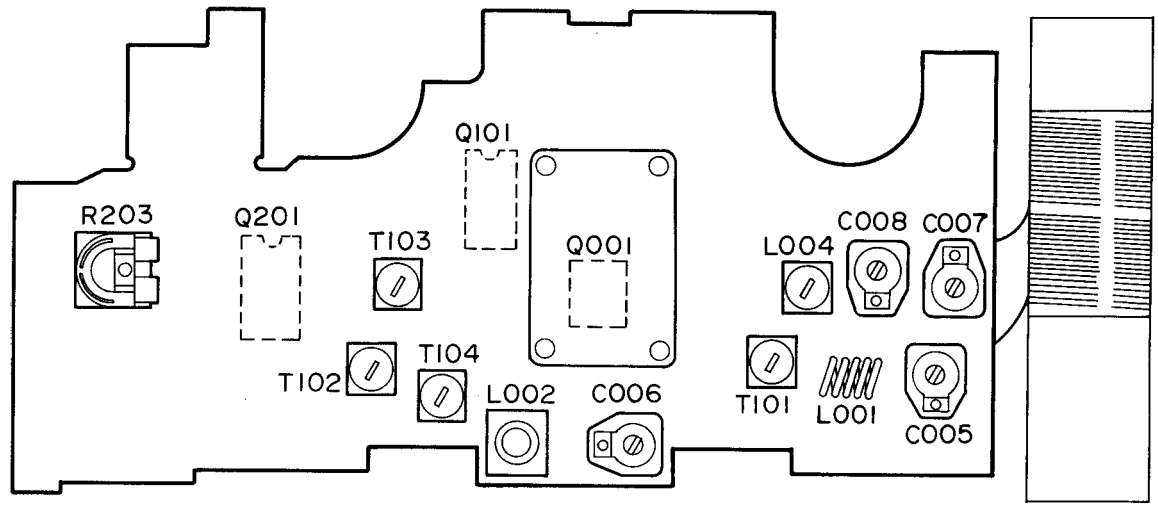
■ **DIAL CORD RESTRINGING**

1. Turn dial drum counterclockwise fully.
2. Set spring on rim of circular opening of frame.
3. Proceed stringing in steps ① to ⑫. Hook dial cord ring on spring.
4. Apply adhesive #575 on location marked ⑤ (dial drum and cord) (Be careful the adhesive do not flow over the dial drum).





6. ALIGNMENT INSTRUCTIONS

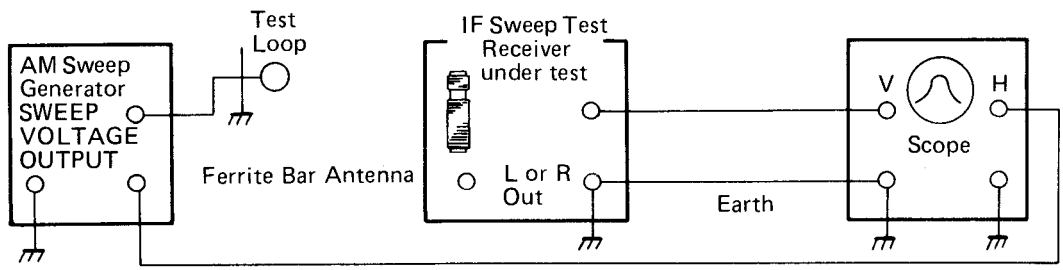


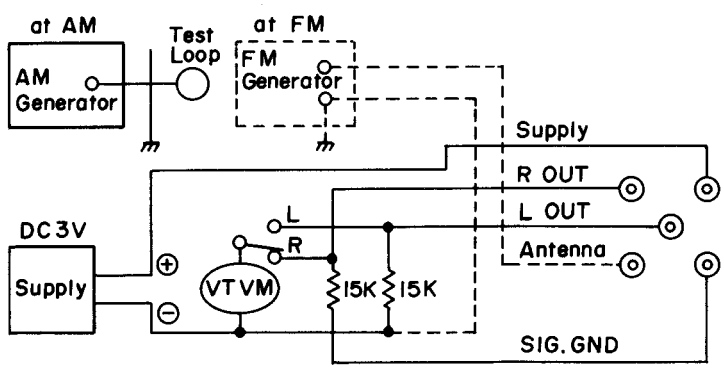
AM-IF ALIGNMENT

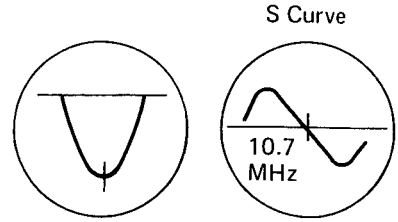
1. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded lead to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Proceed as outlined in the AM-IF ALIGNMENT CHART.

AM-IF ALIGNMENT CHART

Step	Signal Coupling	Equip.	Tuning	Connection	Adjust. Point	Pattern
1	Connect sweep generator output to a loop antenna.	Sweep generator of 455 kHz center freq. with 455 kHz marker.	Tuning Knob fully counter-clockwise (Highest Frequency).	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	T102 T104	Adjust coil T102 and T104 until the best single peak is obtained.







AM ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

AM ALIGNMENT CHART

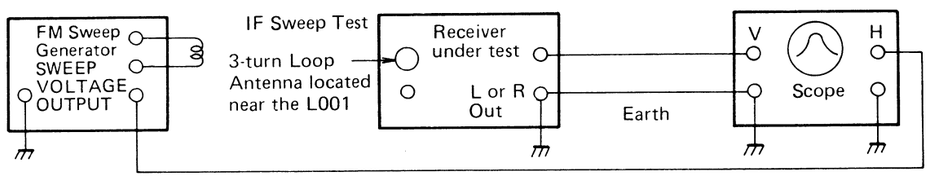
Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	510 kHz	Tuning Knob Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L004	Adjust for maximum output indication.
2	1650 kHz	Tuning Knob Fully Clockwise (Highest Frequency)	OSC. Trim C008	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	600 kHz	Tune to signal.	Ant. Coil L003	Adjust for maximum output indication.
5	1400 kHz		Ant. Trim C007	
6	Repeat steps 4 and 5 as required.			

FM-IF ALIGNMENT

1. Turn on both sweep generator and oscilloscope, and allow fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded load to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Process as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10 cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counter-clockwise (Highest Frequency).	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" sweep generator output to horizontal axis "H".	T101 T103	Turn the coil T103 fully counterclockwise to obtain a single peak. Fig. 20 Adjust coil T101 in order until the best single peak is obtained. Finally turn the coil T103 to obtain S curve. Fig. 21



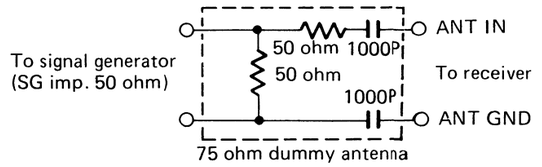
FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART

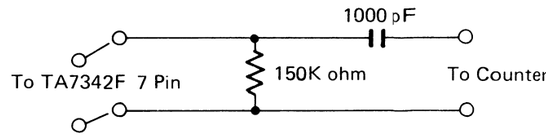
Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.5 MHz	Tuning Knob Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L002	Adjust for maximum output indication.
2	108 MHz	Tuning Knob Fully Clockwise (Highest Frequency)	OSC. Trim. C006	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal	Ant. Coil L001	Adjust for maximum output indication.
5	106 MHz		Ant. Trim. C005	
6	Repeat steps 4 and 5 as required.			

CAUTION: When realigning the FM Receiving Frequency, the highest end of the frequency range should not be more than 108 MHz and the lowest end of hte frequency range should not be less than 87.5 MHz, in order to comply with FTZ regulations in West Germany.



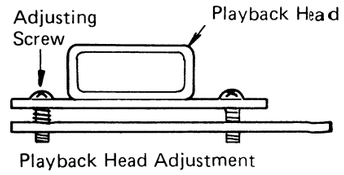
FREE RUN FREQUENCY ALIGNMENT

Adjust R203 under no signal condition so as to obtain 76 kHz ±150 Hz.



PLAYBACK HEAD ADJSUTMENT

A 6.3 kHz standard tape must be used for this adjsutment. Connect a VTVM or an oscilloscope to the EXT Speaker jack and adjust the azimuth by using a philips screwdriver to maintain the maximum output voltage.



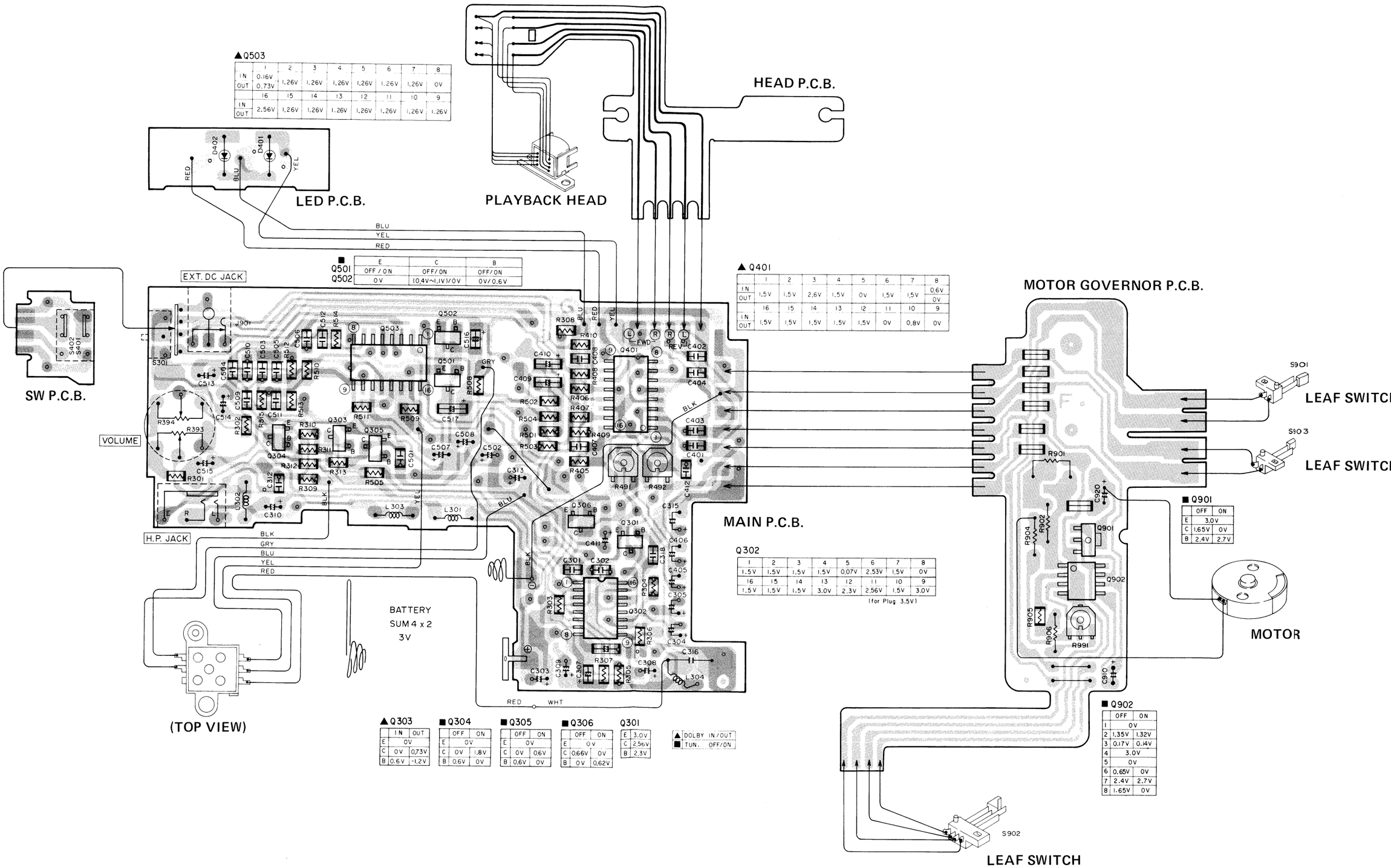
DOLBY LEVEL ADJSUSTMENT

1. Preliminary Work
   1) Place function switch in "NORMAL" position.
   2) Place Dolby switch in "IN" position.
   3) Load MTT-150 (ATT-150) 400 Hz test tape.
   4) Connect a lead (terminated with alligator clip) of VTVM to Dolby output terminal and another lead to chassis ground.
2. Level Adjustment
   1) Playback the test tape.
   2) Adjust trimming pot semi-fixed resistor R491 (L ch), R492 (R ch) until output reading of 100mV ±8mV is obtained on the level meter, using alignment driver. (Proceed this alignment for both left and right channels.)

Note: When connecting alligator clip to the output terminal, clip it to a lead of C515 (L ch), C514 (R ch) (film type capacitor).

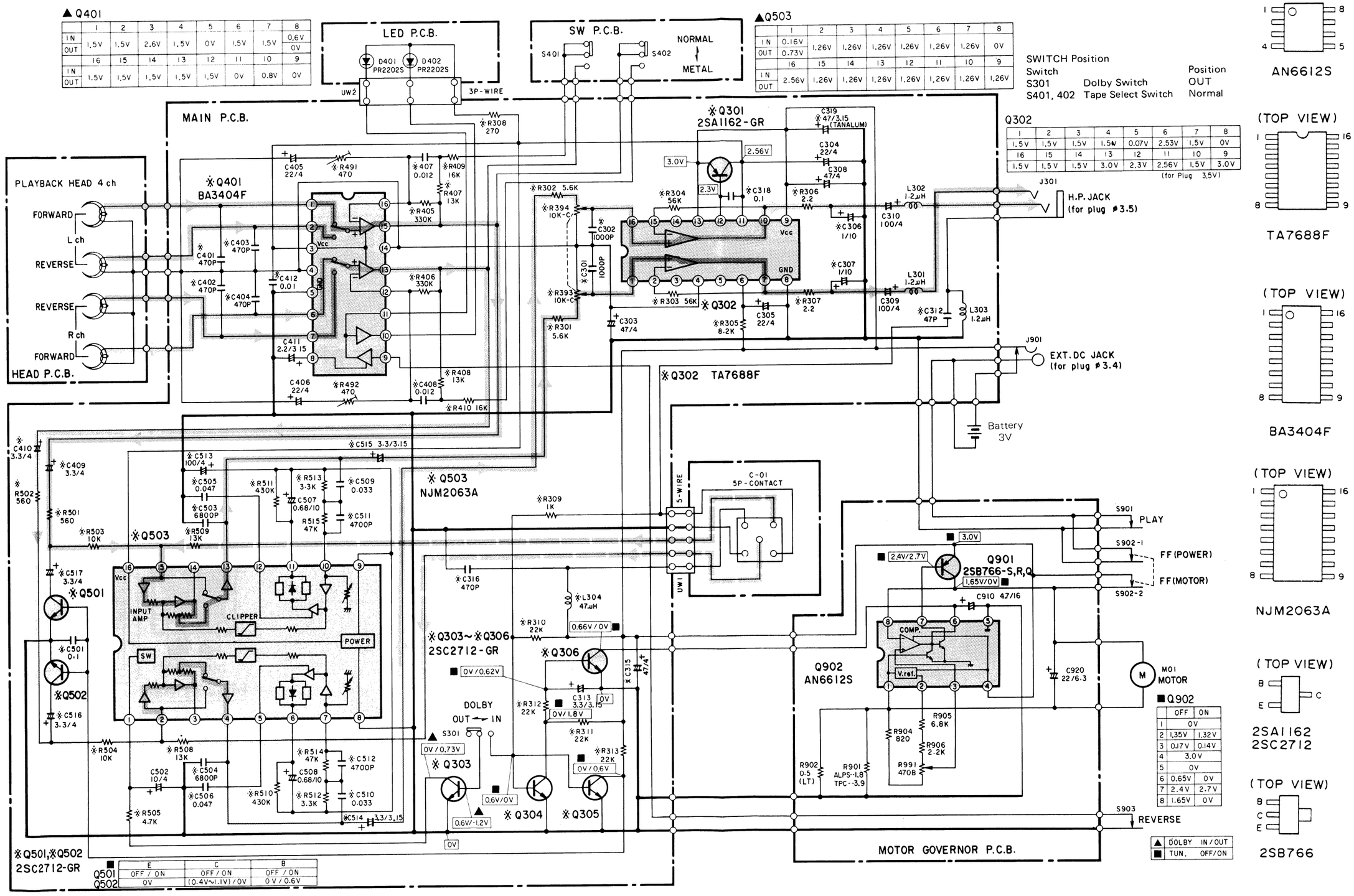
7-1. ELECTRICAL PARTS LOCATIONS

– CASSETTE PLAYER SECTION –



8-1. SCHEMATIC DIAGRAM

— CASSETTE PLAYER SECTION —



7-2. ELECTRICAL PARTS LOCATIONS

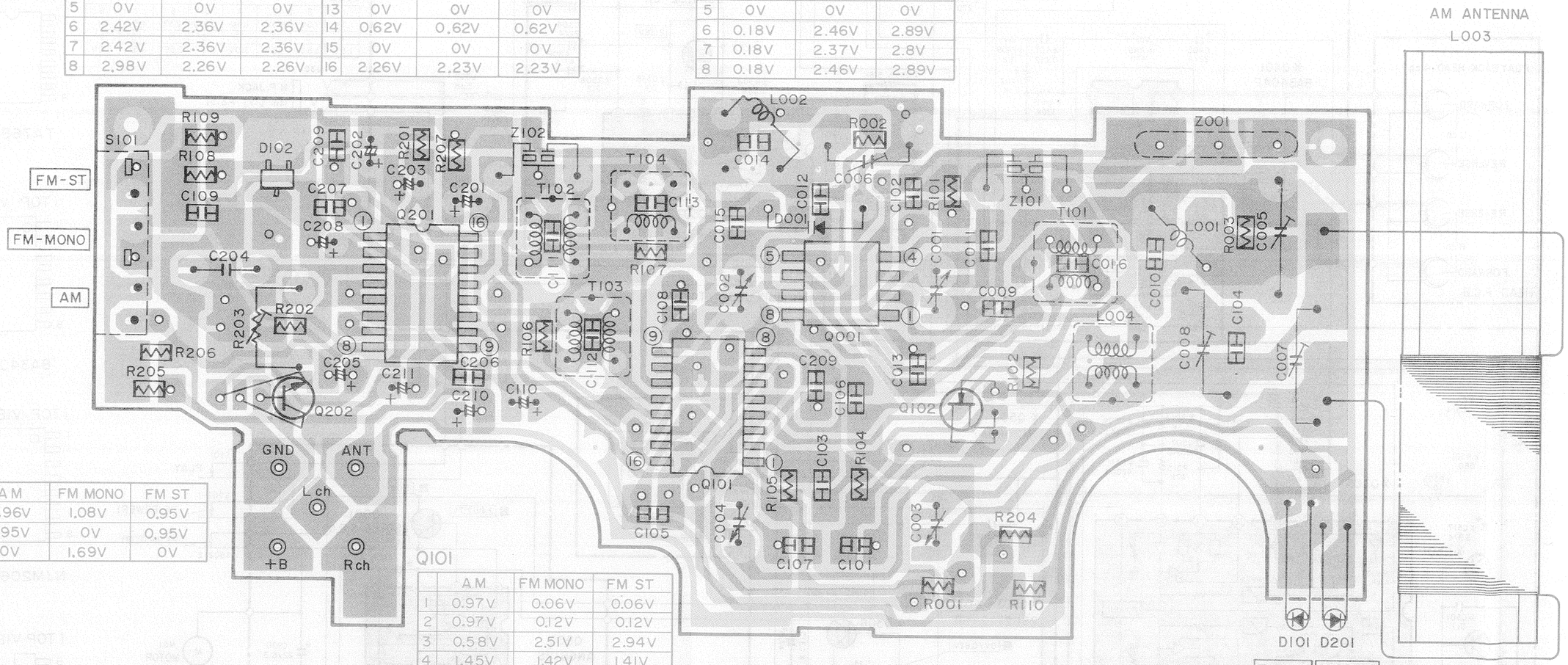
— TUNER PACK SECTION —

Q201

	AM	FM MONO	FM ST		AM	FM MONO	FM ST
1	2.98V	2.94V	2.94V	9	0.95V	1.08V	0.95V
2	2.98V	2.94V	2.94V	10	0.95V	1.08V	0.95V
3	2.37V	2.52V	2.52V	11	0.95V	1.08V	0.95V
4	0V	0V	0V	12	0V	0V	0V
5	0V	0V	0V	13	0V	0V	0V
6	2.42V	2.36V	2.36V	14	0.62V	0.62V	0.62V
7	2.42V	2.36V	2.36V	15	0V	0V	0V
8	2.98V	2.26V	2.26V	16	2.26V	2.23V	2.23V

Q001

	AM	FM MONO	FM ST
1	0V	0.73V	0.76V
2	0.05V	1.48V	1.5V
3	0.18V	2.46V	2.89V
4	0.05V	1.44V	1.46V
5	0V	0V	0V
6	0.18V	2.46V	2.89V
7	0.18V	2.37V	2.8V
8	0.18V	2.46V	2.89V



Q202

	AM	FM MONO	FM ST
E	0.96V	1.08V	0.95V
C	0.95V	0V	0.95V
B	0V	1.69V	0V

Q101

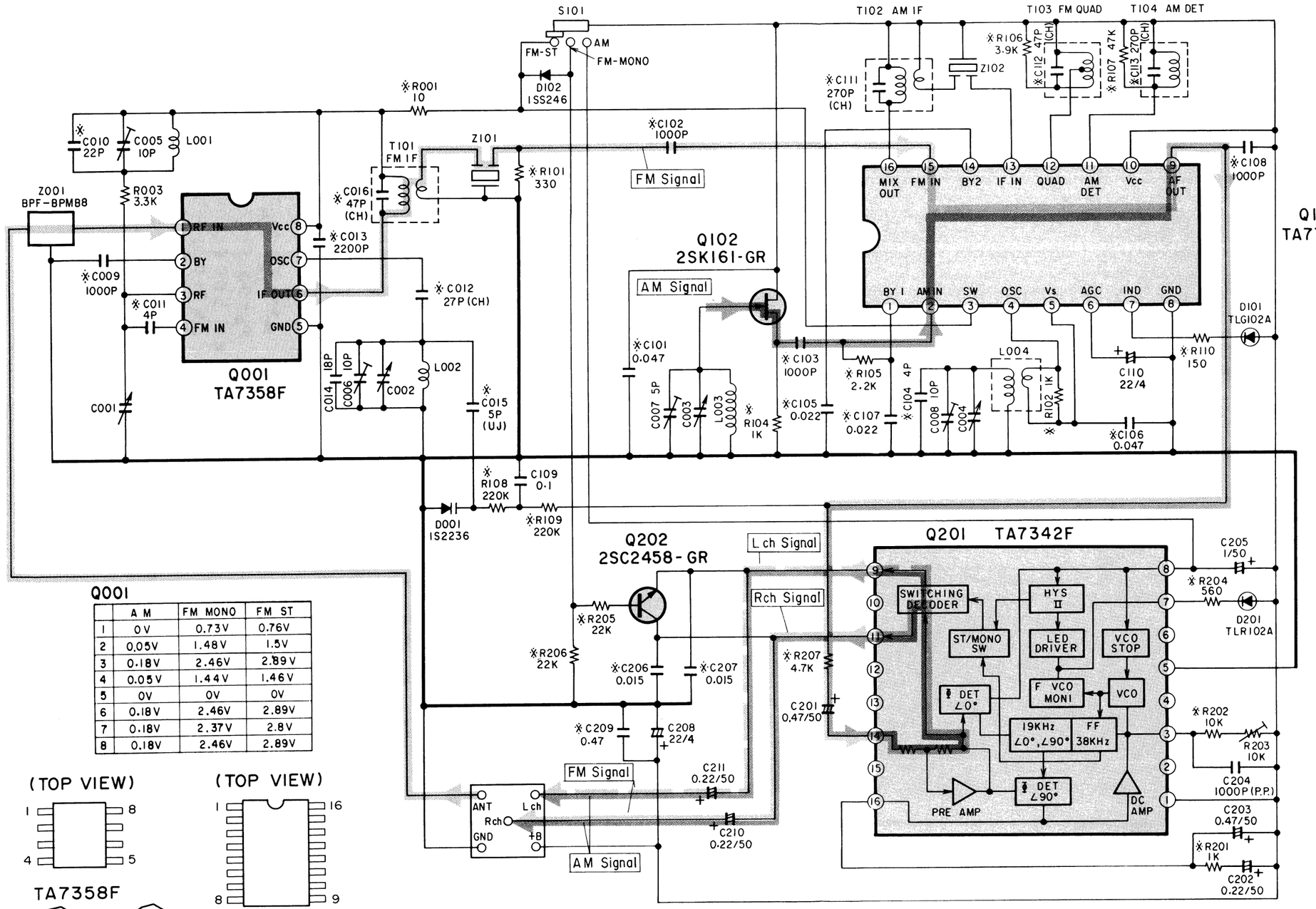
	AM	FM MONO	FM ST
1	0.97V	0.06V	0.06V
2	0.97V	0.12V	0.12V
3	0.58V	2.51V	2.94V
4	1.45V	1.42V	1.41V
5	1.45V	1.42V	1.41V
6	0.47V	0.12V	0.43V
7	1.53V	1.62V	1.47V
8	0V	0V	0V
9	1.35V	1.0V	1.0V
10	2.98V	2.93V	2.94V
11	2.98V	2.93V	2.94V
12	2.98V	2.93V	2.94V
13	1.20V	1.24V	1.23V
14	1.20V	1.24V	1.23V
15	1.45V	1.24V	1.23V
16	2.98V	2.93V	2.94V

Q102

	AM	FM MONO	FM ST
D	2.96V	2.94V	2.94V
G	0V	0V	0V
S	1.27V	1.21V	1.2V

8-2. SCHEMATIC DIAGRAM

— TUNER PACK SECTION —



Q101

	AM	FM MONO	FM ST
1	0.97V	0.06V	0.06V
2	0.97V	0.12V	0.12V
3	0.58V	2.51V	2.94V
4	1.45V	1.42V	1.41V
5	1.45V	1.42V	1.41V
6	0.47V	0.12V	0.43V
7	1.53V	1.62V	1.47V
8	0V	0V	0V
9	1.35V	1.0V	1.0V
10	2.98V	2.93V	2.94V
11	2.98V	2.93V	2.94V
12	2.98V	2.93V	2.94V
13	1.20V	1.24V	1.23V
14	1.20V	1.24V	1.23V
15	1.45V	1.24V	1.23V
16	2.98V	2.93V	2.94V

Q201

	AM	FM MONO	FM ST
1	2.98V	2.94V	2.94V
2	2.98V	2.94V	2.94V
3	2.37V	2.52V	2.52V
4	0V	0V	0V
5	0V	0V	0V
6	2.42V	2.36V	2.36V
7	2.42V	2.36V	2.36V
8	2.98V	2.26V	2.26V
9	0.95V	1.08V	0.95V
10	0.95V	1.08V	0.95V
11	0.95V	1.08V	0.95V
12	0V	0V	0V
13	0V	0V	0V
14	0.62V	0.62V	0.62V
15	0V	0V	0V
16	2.26V	2.23V	2.23V

Q001

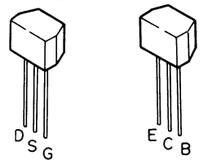
	AM	FM MONO	FM ST
1	0V	0.73V	0.76V
2	0.05V	1.48V	1.5V
3	0.18V	2.46V	2.89V
4	0.05V	1.44V	1.46V
5	0V	0V	0V
6	0.18V	2.46V	2.89V
7	0.18V	2.37V	2.8V
8	0.18V	2.46V	2.89V

(TOP VIEW)

TA7358F

(TOP VIEW)

TA7342F
TA7757F



2SK161 2SC2458

Q202

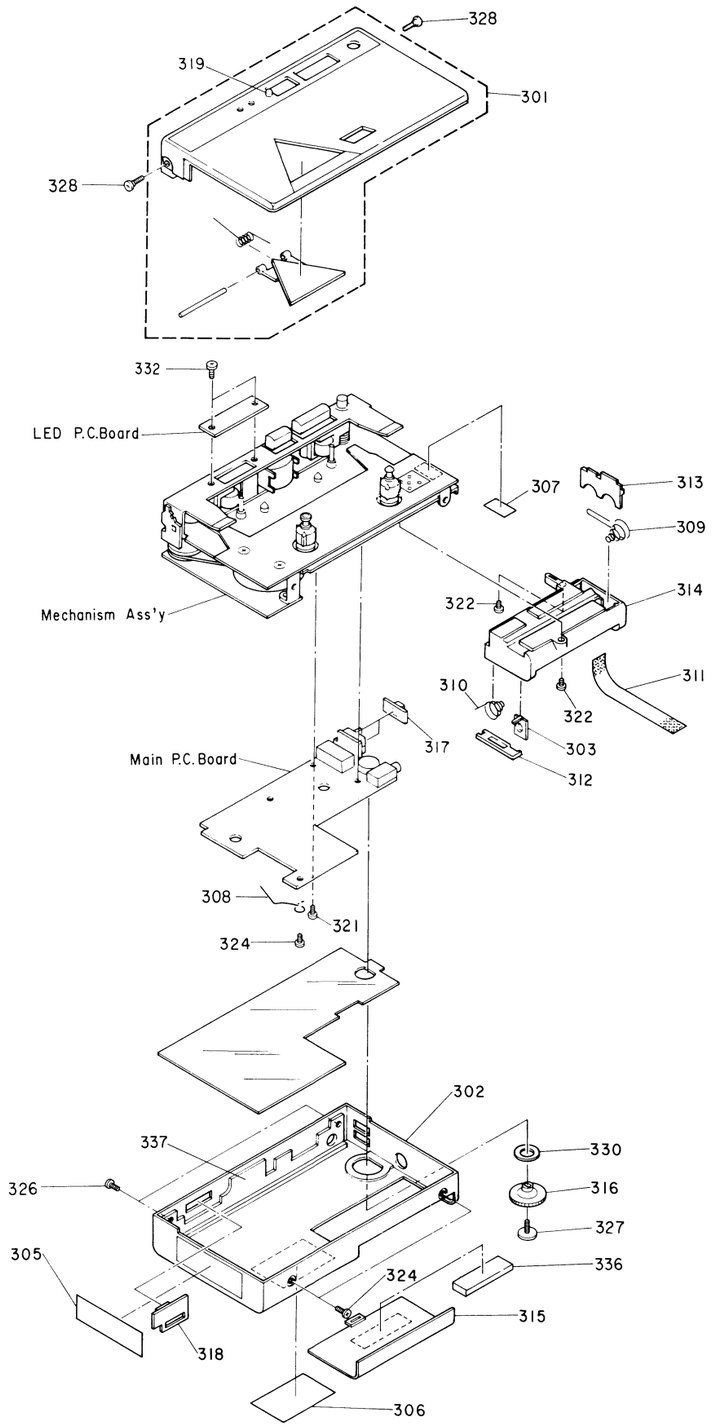
	AM	FM MONO	FM ST
E	0.96V	1.08V	0.95V
C	0.95V	0V	0.95V
B	0V	1.69V	0V

Q102

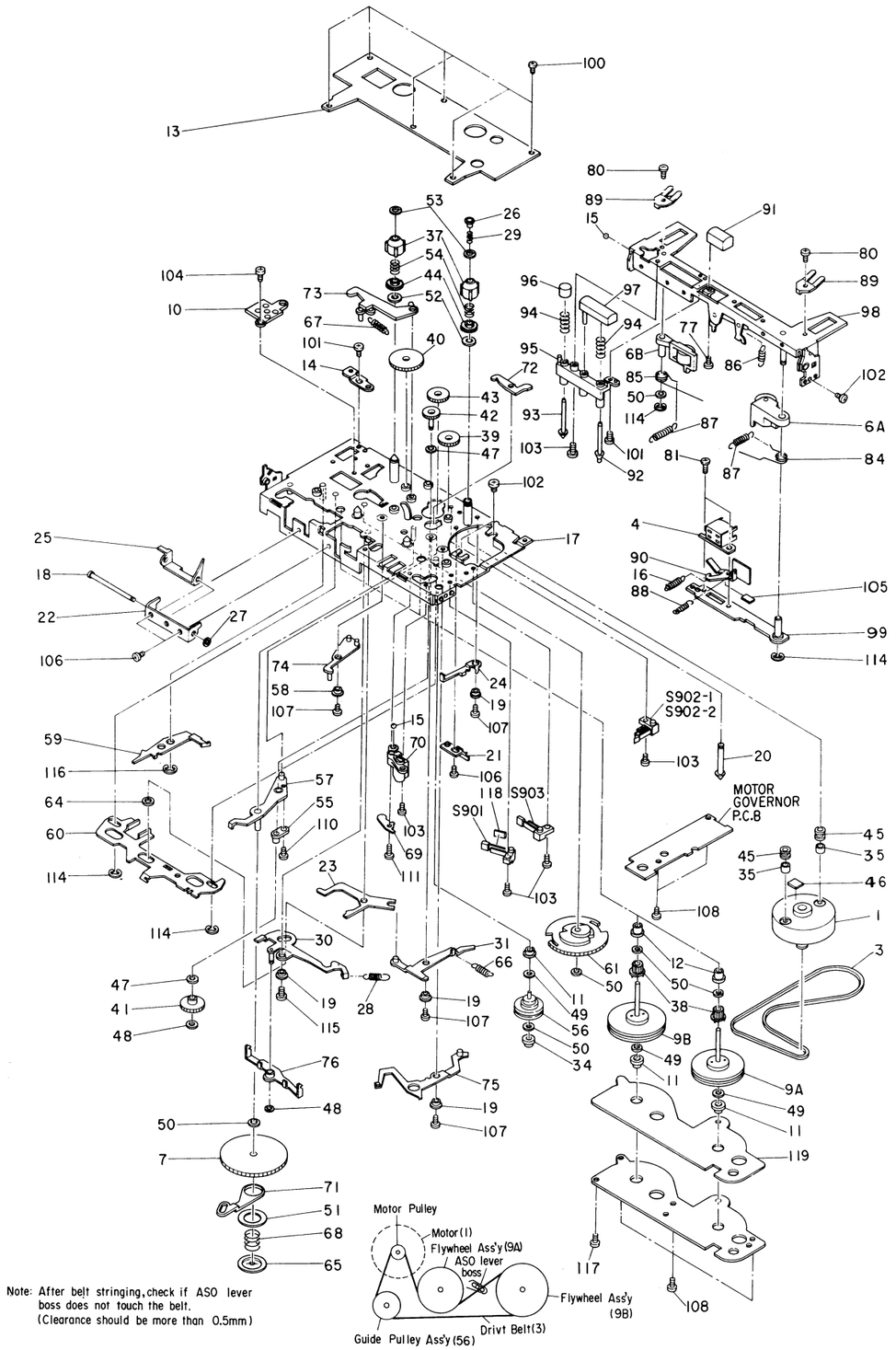
	AM	FM MONO	FM ST
D	2.96V	2.94V	2.94V
G	0V	0V	0V
S	1.27V	1.21V	1.2V

9. CABINET EXPLODED VIEW

— CASSETTE PLAYER SECTION —



10. MECHANISM EXPLODED VIEW



Note: After belt stringing, check if ASO lever boss does not touch the belt. (Clearance should be more than 0.5mm)

11. PARTS LIST

– CASSETTE PLAYER SECTION –

Symbol No.	Part No.	Description
	MECHANISM PARTS	
1	25791755	Motor Ass'y
3	25755598	Belt, Drive
4	22217446	Play Head, HRPT-446
6A	25717597	Pressure Roller Ass'y, Right
6B	25717596	Pressure Roller Ass'y, Left
7	25791691	Take Up Gear Ass'y
9A	25717598	Flywheel Ass'y
9B	25797015	Flywheel Ass'y, Left
10	22161922	Connector, 5P
11	25725468	Bearing
12	25725460	Bearing
13	25734508	Mechanism Cover
15	25757129	Steel Ball
16	25776609	Spring
17	25797013	Main Chassis Ass'y
18	25722505	Pin, Play Lever
19	25726722	Spacer
20	25727286	FF Shaft
21	25734507	Fast Lever Guide
23	25747170	Play Lock Lever
24	25747176	Fast Switch Lever
25	25747178	Play Lever
26	25754474	Reel Bush
27	25766136	Washer
28	25776706	Spring
29	25777361	Spring
30	25791710	Switch Lever Ass'y
31	25791711	Fast Lock Lever Ass'y
34	25725469	Bearing
35	25726714	Spacer, Motor
36	25737111	Flywheel Holder Ass'y
37	25754467	Reel, Top
38	25756396	Flywheel Gear
39	25756397	Relay Gear, Right
40	25756398	Relay Gear, Left
41	25756399	FF Gear, A
42	25791786	FF Gear Ass'y
43	25756401	Rewind Gear
44	25756402	Reel Gear
45	25761492	Cushion, Motor
46	25761522	Cushion
47	25766042	Washer
48	25766050	Washer
49	25766082	Washer
50	25766097	Washer
51	25766099	Washer
52	25766171	Washer
53	25766178	Washer
54	25777359	Spring
55	25783368	Bearing, Fast
56	25713587	Guide Pulley Ass'y
57	25791709	Fast Lever Ass'y
58	25726723	Boss, Detection Lever
59	25747177	Manual Lever
60	25749066	Reverse Slider
61	25756403	Reverse Gear
64	25766203	Washer
65	25766179	Spring Frict
66	25776705	Spring
67	25776707	Spring
68	25777360	Spring
69	25779441	Spring
70	25783367	Click MNT.
71	25784138	Frict Lever
72	25784139	Limit ASO Lever
73	25784140	Gear Lock Lever
74	25784141	ASO Lever
75	25791706	Limit Lever Ass'y
76	25791707	Reverse Lever Ass'y
77	22707422	Special Screw
80	22708175	Screw, 1.7ϕ x 1.4mm, PAN
81	22708217	Screw, 2ϕ x 2mm, PAN
84	25775271	Spring
85	25775272	Spring
86	25776568	Spring
87	25776702	Spring
88	25776703	Spring
89	25779268	Spring
90	25779414	Spring
91	25783372	Button, Play
92	25727284	Play Shaft
93	25727285	Shaft, Manual
94	25777235	Spring
95	25783369	Button Holder
96	25783370	Button, Reverse
97	25783371	Button, Play
98	25791708	Cassette Holder Ass'y
99	25797006	Head Lever Ass'y
100	22707495	Screw, 1.4ϕ x 1.6mm, FLT
101	22707862	Screw, 1.7ϕ x 2mm, PAN
102	22707970	Screw, 1.7ϕ x 3mm, PAN
103	22707978	Screw, 1.7ϕ x 2.5mm, PAN
104	22708218	Screw, 1.4ϕ x 1.6mm, PAN
106	22707830	Screw, 1.7ϕ x 1.6mm, PAN
107	22707956	Screw, 1.4ϕ x 1.6mm, PAN
108	22707832	Screw, 1.4ϕ x 2.5mm, PAN
110	22708216	Screw, 1.4ϕ x 2mm, PAN
111	22707819	Screw, 1.7ϕ x 4.5mm, BID
114	22703117	E Ring, 1.5ϕ
115	22708275	Screw, 1.4ϕ x 1.4mm, PAN
117	22708298	Screw, 1.4ϕ x 2.5mm, FLT

12. PARTS LIST

— CASSETTE PLAYER SECTION —

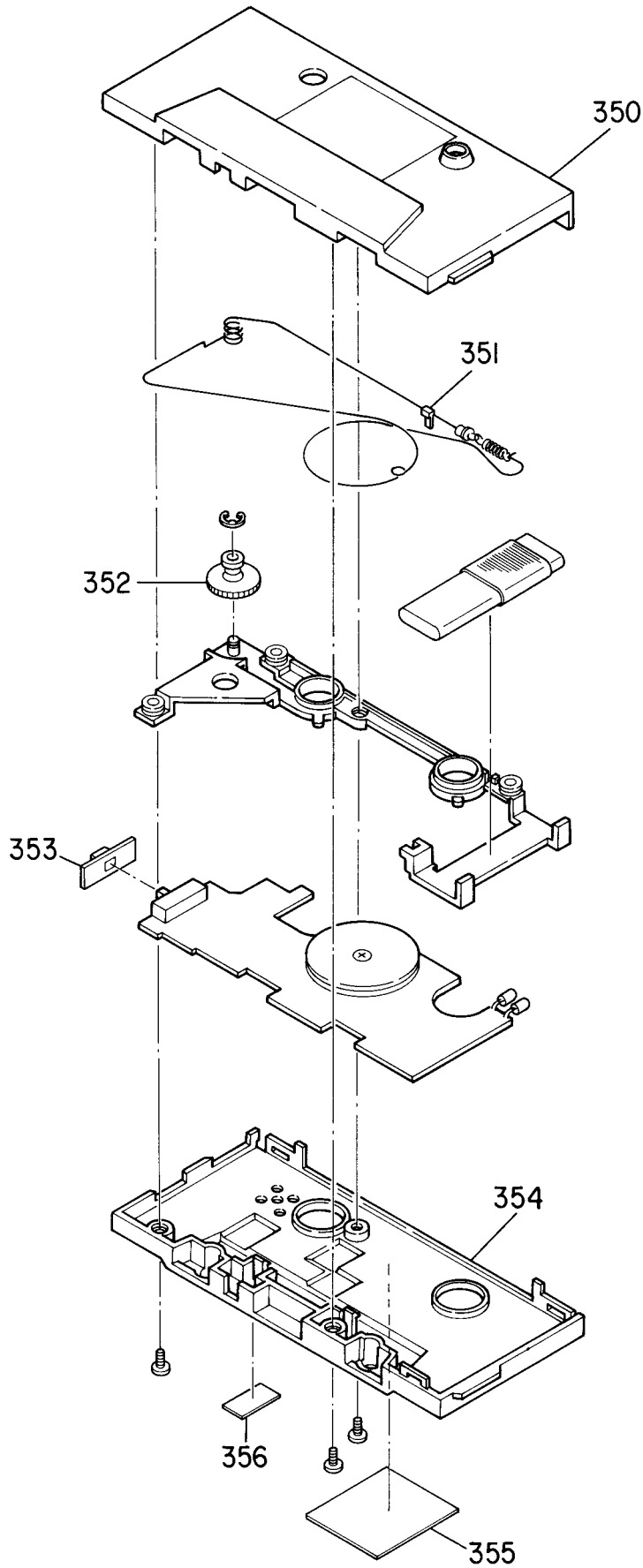
Symbol No.	Part No.	Description
CABINET PARTS TA, TC–S, K TE, AY–S, K, R FY–S S = Silver, K = Black, R = Red		
301	25883426	Front Cabinet Ass'y (S–TA, TC, TE, AY, FY)
301	25883475	Front Cabinet Ass'y (K–TA, TC, TE, AY)
301	25883476	Front Cabinet Ass'y (R–TE, AY)
302	25882686	Back Cabinet (S–TA, TC, TE, AY, FY)
302	25882718	Back Cabinet (K–TA, TC, TE, AY)
302	25882721	Back Cabinet (R–TE, AY)
303	22725264	Battery Contact
305	22900418	Name Label (S–TA, TC, AY, TE)
305	22900423	Name Label (K–TA, TC, TE, AY, R–TE, AY)
305	22900438	Name Label (S–FY)
306	22900419	Dolby Label (S–TA, TC, AY, TE, FY)
306	22900424	Dolby Label (K–TA, TC, TE, AY, R–TE, AY)
307	22900416	Caution Label
308	25775277	Earth Contact
309	25777357	Spring, Battery A
310	25777358	Spring, Battery B
311	25830283	Ribbon, Battery
312	25831364	Speacer, Battery Holder
313	25831370	Speacer, Battery B
314	25882685	Battery Holder
315	25882687	Battery Cover (S–TA, TC, AY, TE, FY)
315	25882719	Battery Cover (K–TA, TC, TE, AY)
315	25882722	Battery Cover (R–TE, AY)
316	25886192	Knob, Volume
317	25886193	Knob, Switch
318	25886194	Knob, Reverse
319	25808760	Decoration Ball
321	22707642	Screw, 1.4ϕ x 2.5mm, PAN
322	22707832	Screw, 1.4ϕ x 2.5mm, PAN
324	22707725	Screw, 1.7ϕ x 2.5mm, PAN
324	22707866	Screw, 1.7ϕ x 2.5mm, PAN (S–TA, TE, AY, TE, FY, R–TE, AY)
326	22708028	Screw, 1.7ϕ x 4mm, PAN (S–TA, TC, AY, TE, FY, R–TE, AY)
326	22707670	Screw, 1.7ϕ x 4mm, PAN (K–TA, TC, TE, AY)
327	22708174	Screw, Decoration
328	22708176	Special Screw, 1.4ϕ x 4.2mm (S–TA, TC, AY, TE, FY, R–TE, AY)
328	22708210	Special Screw, 1.4ϕ x 4.2mm (K–TA, TC, TE, AY)
330	22766030	Spacer, Volume
332	22708269	Screw, 1.7ϕ x 18mm, PAN
336	25857261	Battery Cushion
337	25831367	Jack Holder
TRANSISTORS, IC'S & DIODES		
Q301	A6541140	Transistor, 2SA1162-GR
Q303 ∿ 306, 501, 502	A6335480	Transistor, 2SC2712-GR
D401, 402	22115523	Diode, PR2202S
ELECTRICAL PARTS		
L301, 302, 303	22291289	Coil, Choke
L304	22291308	Coil, Choke
S301	22196060	Switch, Slide, Dolby IN ↔ OUT
S401, 402	22196455	Switch, Slide, Normal ↔ Metal
S901	22196423	Switch, Leaf, Play
S902	22196400	Swithc, Leaf, –1 . . . FF (POWER) –2 . . . FF (MOTOR)

Symbol No.	Part No.	Description
S903	22196222	Switch, Leaf, Reverse
J301	22198115	Jack, Headphone, 3.5ϕ
J901	22198074	Jack, DC Power, 3.4ϕ
U01	22192450	Main PC Board
U02	22130748	PC Board Ass'y
U03	22130749	PC Board Ass'y
EP01	22121077	Tuner Pack (TA, TC)
EP02	22121078	Tuner Pack (TE, AY)
CAPACITORS		
J = ±5%, K = ±10%, M = ±20%, Z = +80%, −20%		
ABBREVIATIONS: TT = Tantalum, EL = Electrolytic		
C301, 302	22314102	Chip, 1000pF, 50V, K
C303	22440652	EL, 47mfd, 4V
C304	22490085	EL, 22mfd, 4V
C305	22440650	EL, 22mfd, 4V
C306, 307	22310027	EL, 1mfd, 10V
C308	22440652	EL, 47mfd, 4V
C309, 310	22440628	EL, 100mfd, 4V
C312	22311470	Chip, 47pF, 50V, J
C313	22490177	EL, 3.3mfd, 3.15V
C315	22440652	EL, 47mfd, 4V
C316	22314471	Chip, 470pF, 50V, K
C318	22313104	Chip, 0.1mfd, 25V, Z
C401, 402, 403, 404	22314471	Chip, 470pF, 50V, K
C405, 406	22440650	EL, 22mfd, 4V
C407, 408	22314123	Chip, 0.012mfd, 50V, K
C409, 410	22310087	EL, 3.3mfd, 4V
C411	22490174	TT, 2.2mfd, 3.15V
C412	22314103	Chip, 0.01mfd, 50V, J
C501	22313104	Chip, 0.1mfd, 25V, Z
C502	22490081	TT, 10mfd, 4V
C503, 504	22314682	Chip, 6800pF, 50V, K
C505, 506	22317473	Chip, 0.047mfd, 25V, M
C507, 508	22490176	TT, 0.68mfd, 10V
C509, 510	22316333	Chip, 0.033mfd, 50V, M
C511, 512	22314472	Chip, 4700pF, 50V, K
C513	22440628	EL, 100mfd, 4V
C514, 515	22490177	EL, 3.3mfd, 3.15V
C516, 517	22310087	EL, 3.3mfd, 4V
C910	22440537	EL, 4.7mfd, 16V
C920	22440562	EL, 22mfd, 6.3V

Symbol No.	Part No.	Description
RESISTORS		
R301, 302	22521562	5.6K ohm, 1/10W, Chip
R303, 304	22521563	56K ohm, 1/10W, Chip
R305	22521822	8.2K ohm, 1/10W, Chip
R306, 307	22521229	2.2 ohm, 1/10W, Chip
R308	22521271	270 ohm, 1/10W, Chip
R309	22521102	1K ohm, 1/10W, Chip
R310, 311, 312, 313	22521223	22K ohm, 1/10W, Chip
R393/394	22610005	10K ohm, Variable, Volume
R405, 406	22521334	330K ohm, 1/10W, Chip
R407, 408	22520001	13K ohm, 1/10W, Chip
R409, 410	22520002	16K ohm, 1/10W, Chip
R491, 492	22658780	470 ohm, Semi-fixed, Variable
R501, 502	22521561	560 ohm, 1/10W, Chip
R503, 504	22521103	10K ohm, 1/10W, Chip
R505	22521472	4.7K ohm, 1/10W, Chip
R508, 509	22520001	13K ohm, 1/10W, Chip
R510, 511	22521434	430K ohm, 1/10W, Chip
R512, 513	22521332	3.3K ohm, 1/10W, Chip
R514, 515	22521473	47K ohm, 1/10W, Chip
R901	22584189	1.8 ohm, 1/6W, Carbon
R901	22584339	3.3 ohm, 1/6W, Carbon
R902	22500398	0.5 ohm, 1/8W, Linear
R904	22584821	820 ohm, 1/6W, Carbon
R905	22531682	6.8K ohm, 1/8W, Chip
R906	22521222	2.2K ohm, 1/10W, Chip
R991	22658781	470 ohm, B, Semi-fixed, Variable

13. CABINET EXPLODED VIEW

– TUNER PACK SECTION –



14. PARTS LIST

– TUNER PACK SECTION –

Symbol No.	Part No.	Description
	CABINET PARTS	
350	22825325	Cabinet, Upper Ass'y
351	22741451	Pointer
352	22884404	Knob, Tuning
353	22884405	Knob, Band
354	22882096	Cabinet, Bottom
355	22866247	Name Label
356	22900416	Label, Caution

Symbol No.	Part No.	Description
	DIODES	
D101	A8605140	Diode, TLG102A
D102	A7153100	Diode, 1SS246
D201	A8600035	Diode, TLR102A
	ELECTRICAL PARTS	
Z001	22153266	Filter
Z102	22153322	Filter, Ceramic
S101	22196364	Switch, Slide
L002	22292193	Coil
L003	22242989	Coil
	CAPACITORS	
C001, 002, 003, 004	22308587	VC
C007	22309211	Trimmer
C005, C006, 104	22309212	Trimmer

15. ACCESSORIES

Symbol No.	Part No.	Description
AC01	22152162	Headphone
AC02	22904133	Owner's Manual (TA)
AC02	22904134	Owner's Manual (TC)
AC02	22904135	Owner's Manual (TE)
AC02	22904136	Owner's Manual (AY)
AC02	22904188	Owner's Manual (FY)
AC04	22941301	Poly Bag
AC05	22957628	Caution Sheet (S, K–TA)
AC07	22991146	Carrying Case
AC09	25883269	Battery Pack
AC10	22991144	Belt
AC11	22810109	Ear Pad Set

TOSHIBA CORPORATION
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